UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/716,907	11/20/2000	Geert Florimond Gerard Depovere	PHN 17,772	8131

24737	7590	09/20/2005	

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER
SHERKAT, AREZOO

ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _08 July 2005_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-3,5-7,9 and 10_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-3,5-7,9 and 10_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _20 November 2000_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Amendment

This office action is in response to Applicant's amendment received on July 8, 2005. Claims 4, 8, and 11 have been cancelled. Claims 1, 5, 9, and 10 have been amended.

Response to Arguments

Applicant's arguments filed on July 8, 2005 have been fully considered but they are not persuasive.

Applicant argues that in claims 1 and 9, a given property of the information signal to be watermarked is analyzed and an actual value of the given property is determined. ... the set of basic watermark patterns from the plurality of sets of watermark patterns which is associated with the actual value of the property is selected for watermarking the information signal (Remarks, page 7, last paragraph).

Examiner responds that Rao discloses calculating a texture value associated with the corresponding portion or several portions of the image. The portion(s) may be matrices of pixel values of the image, and the texture value may represent a measure of a base strength of the portion, or of other characteristics of the image content of the portion. Next, a **watermark image** is selected at step 204, and then parameters associated with a model for watermark strength, which use the texture values are retrieved at step 205 ... (Col. 5, lines 8-48). Therefore, Rao's disclosure applies different watermark patterns/strengths for watermaking different images.

Examiner respectfully maintains the rejection formulated on April 5, 2005, as

follows:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 5-6, and 9-10 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Linnartz, (U.S. Patent No. 5,933,798 and Linnartz hereinafter), in

view of Rao et al., (U.S. Patent No. 6,222,932 and Rao hereinafter).

Regarding claim 1, Linnartz discloses a method of embedding a watermark in an

information signal, comprising the steps:

associating different sets of basic watermark patterns in a plurality of sets of

basic watermark patternss with distinct values of said property, each set of basic

watermark patterns being a combination of two or more basic watermark patterns (i.e.,

the luminance value p(n) and watermark data value wi(n) are added by an adder 12

pixel by pixel)(Col. 2, lines 1-67 and Col. 3, lines 1-35).

Linnartz does not expressly disclose the step of analyzing a given property of the

information signal and selecting the watermark from said plurality of watermarks

associated with said actual value for embedding in the information signal.

However, Rao discloses analyzing a given property of the information signal and determining an actual value of said property, and selecting the set of basic watermark patterns from said plurality of sets of basic watermark patterns associated with said actual value for embedding in the information signal (i.e., a texture value associated with the corresponding portion or several portions of the image is calculated. The portion(s) may be matrices of pixel values of the image, and the texture value may represent a measure of a base strength of the portion, or of other characteristics of the image content of the portion. Next, a **watermark image/watermark pattern** is selected at step 204, and then parameters associated with a model for watermark strength, which use the texture values are retrieved at step 205)(Col. 5, lines 7-67 and Col. 6, lines 1-20 and Col. 9, lines 17-67 and Col. 10, lines 1-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the watermarking and watermark detection system of Linnartz to include analyzing a given property of the information signal and determining an actual value of said property, and selecting the watermark from said plurality of watermarks associated with said actual value for embedding in the information signal as suggested by Rao. This modification would have been obvious because one of ordinary skill in the art would have been motivated to have a technique to automatically adjust or select the strength of the watermark based on the texture of each image to allow a large number of images to be automatically watermarked, thus increasing the throughput of the watermarking stage (Rao, Col. 1, lines 15-46).

Regarding claims 2 and 6, Linnartz does not expressly disclose that the method of analyzing the information signal as a sequence of video images.

However, Rao discloses an analyzing step comprising:

analyzing a spatial or temporal distribution of luminance values, each distinct distribution of luminance values constituting a value of said property of the information signal (i.e., a method of calculating the pixel brightness or strength value in a reference image for adjusting the watermark strength)(Col. 7, lines 35-67 and Col. 8, lines 1-51).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the watermarking and watermark detection system of Linnartz to include analyzing a spatial or temporal distribution of luminance values, each distinct distribution of luminance values constituting a value of said property of the information signal as suggested by Rao. This modification would have been obvious because one of ordinary skill in the art would have been motivated to have a technique to automatically adjust or select the strength of the watermark based on the texture of each image to allow a large number of images to be automatically watermarked, thus increasing the throughput of the watermarking stage (Rao, Col. 1, lines 15-46).

Regarding claim 5, Linnartz discloses a method of detecting a watermark in an information signal, comprising the steps:

associating different sets of basic watermark patterns in a plurality of sets of basic watermark patterns with distinct values of said property, each set of basic

watermark patterns being a combination of two or more basic watermark patterns (Col. 3, lines 35-67 and Col. 4-5, lines 1-67 and Col. 6, lines 1-40).

Linnartz does not expressly disclose the step of analyzing a given property of the information signal and selecting the watermark from said plurality of watermarks associated with said actual value for embedding in the information signal.

However, Rao discloses analyzing a given property of the information signal and determining an actual value of said property, and selecting the set of basic watermark pattern from said plurality of sets of basic watermark patterns associated with said actual value for embedding in the information signal (i.e., a texture value associated with the corresponding portion or several portions of the image is calculated. The portion(s) may be matrices of pixel values of the image, and the texture value may represent a measure of a base strength of the portion, or of other characteristics of the image content of the portion. Next, a **watermark image/watermark pattern** is selected at step 204, and then parameters associated with a model for watermark strength, which use the texture values are retrieved at step 205)(Col. 5, lines 7-67 and Col. 6, lines 1-20 and Col. 9, lines 17-67 and Col. 10, lines 1-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the watermarking and watermark detection system of Linnartz to include analyzing a given property of the information signal and determining an actual value of said property, and selecting the set of basic watermark patterns from said plurality of sets of basic watermark patterns associated with said actual value for embedding in the information signal as suggested by Rao. This

modification would have been obvious because one of ordinary skill in the art would

have been motivated to have a technique to automatically adjust or select the strength

of the watermark based on the texture of each image to allow a large number of images

to be automatically watermarked, thus increasing the throughput of the watermarking

stage (Rao, Col. 1, lines 15-46).

Regarding claim 9, Linnartz discloses a watermark embedder for embedding a

watermark in an information signal, comprising:

means for associating different watermarks in a plurality of watermarks with

distinct values of said property (i.e., the luminance value p(n) and watermark data value

wi(n) are added by an adder 12 pixel by pixel), each set of basic watermark patterns

being a combination of two or more basic watermark patterns (Col. 3, lines 35-67 and

Col. 4-5, lines 1-67 and Col. 6, lines 1-40).

Linnartz does not expressly disclose means for analyzing a given property of the

information signal and means for selecting the watermark from said plurality of

watermarks associated with said actual value for embedding in the information signal.

However, Rao discloses means for analyzing a given property of the information

signal and determining an actual value of said property, and means for selecting the set

of basic watermark patterns from said plurality of sets of basic watermark patterns

associated with said actual value for embedding in the information signal (i.e., a texture

value associated with the corresponding portion or several portions of the image is

calculated. The portion(s) may be matrices of pixel values of the image, and the texture

value may represent a measure of a base strength of the portion, or of other characteristics of the image content of the portion. Next, a **watermark image/watermark pattern** is selected at step 204, and then parameters associated with a model for watermark strength, which use the texture values are retrieved at step 205)(Col. 5, lines 7-67 and Col. 6, lines 1-20 and Col. 9, lines 17-67 and Col. 10, lines 1-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the watermarking and watermark detection system of Linnartz to include means for analyzing a given property of the information signal and determining an actual value of said property, and selecting the set of basic watermark patterns from said plurality of sets of basic watermark patterns associated with said actual value for embedding in the information signal as suggested by Rao. This modification would have been obvious because one of ordinary skill in the art would have been motivated to have a technique to automatically adjust or select the strength of the watermark based on the texture of each image to allow a large number of images to be automatically watermarked, thus increasing the throughput of the watermarking stage (Rao, Col. 1, lines 15-46).

Regarding claim 10, Linnartz discloses a watermark detector for detecting a watermark in an information signal, comprising:

means for associating different sets of basic watermark patterns plurality of sets of basic watermark patterns with distinct values of said property each set of basic

watermark patterns being a combination of two or more basic watermark patterns, each

set of basic watermark patterns being a combination of two or more basic watermark

patterns (Col. 3, lines 35-67 and Col. 4-5, lines 1-67 and Col. 6, lines 1-40).

Linnartz does not expressly disclose means for analyzing a given property of the

information signal and means for selecting the watermark from said plurality of

watermarks associated with said actual value for embedding in the information signal.

However, Rao discloses means for analyzing a given property of the information

signal and determining an actual value of said property, and means for selecting the

watermark from said plurality of watermarks associated with said actual value for

embedding in the information signal (i.e., a texture value associated with the

corresponding portion or several portions of the image is calculated. The portion(s) may

be matrices of pixel values of the image, and the texture value may represent a

measure of a base strength of the portion, or of other characteristics of the image

content of the portion. Next, a **watermark image/watermark pattern** is selected at step

204, and then parameters associated with a model for watermark strength, which use

the texture values are retrieved at step 205)(Col. 5, lines 7-67 and Col. 6, lines 1-20 and

Col. 9, lines 17-67 and Col. 10, lines 1-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of applicant's invention to modify the watermarking and watermark detection

system of Linnartz to include means for analyzing a given property of the information

signal and determining an actual value of said property, and means for selecting the set

fo basic watermark patterns from said plurality of sets of basic watermark patterns

associated with said actual value for embedding in the information signal as suggested

by Rao. This modification would have been obvious because one of ordinary skill in the

art would have been motivated to have a technique to automatically adjust or select the

strength of the watermark based on the texture of each image to allow a large number

of images to be automatically watermarked, thus increasing the throughput of the

watermarking stage (Rao, Col. 1, lines 15-46).

Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Linnartz, (U.S. Patent No. 5,933,798) and Rao et al., (U.S. Patent No. 6,222,932 and

Rao hereinafter), in view of Brust, (U.S. Patent No. 5,260,648).

Teachings of Linnartz and Rao with respect to claims 1 and 5 have been

discussed previously.

Regarding claims 3 and 7, Linnartz does not expressly disclose analyzing a

shape of the frequency spectrum of said audio segments, each distinct shape of the

frequency spectrum constituting a value of said property of the information signal.

However, Brust discloses analyzing a shape of the frequency spectrum of said

audio segments, each distinct shape of the frequency spectrum constituting a value of

said property of the information signal (i.e., in Fig. 6b, the measured spectrum consists

of two pairs of peaks characterizing the two spectral lines of the measuring signal)(Col.

8, lines 27-67 and Col. 9, lines 1-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the combined watermarking and watermark detection system of Linnartz and Rao to include analyzing a shape of the frequency spectrum of said audio segments, each distinct shape of the frequency spectrum constituting a value of said property of the information signal as suggested by Burst. This modification would have been obvious because one of ordinary skill in the art would have been motivated to perform a rapid analysis of the spectrum of a signal at one or several points of measurement, and for determining the spatial distribution of individual spectral lines (Brust, Col. 1, lines 5-12).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arezoo Sherkat whose telephone number is (571) 272-3796. The examiner can normally be reached on 8:00-4:30 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Arezoo Sherkat
Patent Examiner
Group 2131
Sep. 15, 2005

AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100